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L.D.S.

Patent

Attorney's Docket No. 021565-060

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	)	BOX RCE
WATERHOUSE et al	)	Group Art Unit: 1635
Application No.: 09/287,632	)	Examiner: Karen A. LaCourciere
Filed: April 7, 1999	)	Confirmation No.: 6526
For: METHODS AND MEANS FOR	)	
OBTAINING MODIFIED PHENOTYPES	)	

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**FIFTH**  
**INFORMATION DISCLOSURE STATEMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, Applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98. Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed.


The being submitted within three (3) months of the filing or entry of the national stage of this application or before the first Office Action on the merits, whichever is later. Since being filed within the time period set forth in 37 C.F.R. § 1.97(b) no fee or statement is required.

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner-initialed copy of this form be returned to the undersigned.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: March 11, 2003

By:   
Malcolm K. McGowan, Ph.D.  
Registration No. 39,300

P.O. Box 1404  
Alexandria, Virginia 22313-1404  
(703) 836-6620

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## U.S. PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	Translation Yes No

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	✓ Dorian Bevec et al, "Constitutive Expression of Chimeric Neo-Rev Response Element Transcripts Suppresses HIV-1 Replication in Human CD4 <sup>+</sup> T Lymphocytes" <u>Human Gene Therapy</u> , Vol. 5, pp. 193-201 (1994) Mary Ann Liebert, Inc. Publishers, Larchmont, New York USA
	✓ Pontus Blomberg et al, "Control of Replication of Plasmid R1: the Duplex Between the Antisense RNA, CopA, and its Target, CopT, is Processed Specifically <i>in vivo</i> and <i>in vitro</i> by RNase III", <u>The EMBO Journal</u> , Vol. 9, No. 7, pp. 2331-2340, 1990, Oxford University Press, Oxford United Kingdom
	✓ S. Brantl et al, "Copy Number Control of the Streptococcal Plasmid pIP501 Occurs at Three Levels", <u>Nucleic Acids Research</u> , Vol. 20, No. 3, pp. 395-400, 1991, IRL Press Limited, Oxford, England
	✓ F.H. Cameron et al, "Specific Gene Suppression by Engineered Ribozymes in Monkey Cells", <u>Proc. Natl. Acad. Sci. USA</u> , Vol. 86, pp. 9139-9143, Dec. 1989, National Academy of Sciences, Washington, D.C. USA
	✓ Marinee K.L. Chuah et al, "Inhibition of Human Immunodeficiency Virus Type-1 by Retroviral Vectors Expressing Antisense-TAR", <u>Human Gene Therapy</u> , Vol. 5, pp. 1467-1475 (Dec. 1994), Mary Ann Liebert, Inc., Publishers, Larchmont, New York USA
	✓ Martin Citron et al, "The c4 Repressors of Bacteriophages P1 and P7 Are Antisense RNAs", <u>Cell</u> , Vol. 62, pp. 591-598, August 1990, Cell Press, Cambridge, Massachusetts, USA
	✓ Claudio Denoya et al, "Translational Autoregulation of <i>ermC</i> 23S rRNA Methyltransferase Expression in <i>Bacillus subtilis</i> ", <u>Journal of Bacteriology</u> , Dec. 1986, pp. 1133-1141, American Society for Microbiology, Washington, D.C. USA

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	✓ Douglas R. Dorer et al, Expansions of Transgene Repeats Cause Heterochromatin Formation and Gene Silencing in <i>Drosophila</i> ", <u>Cell</u> Vol. 77, July 1, 1994, pp. 993-1002, Cell Press Cambridge, Massachusetts, USA
	✓ Alain Gervaix et al, "Multigene Antiviral Vectors Inhibit Diverse Human Immunodeficiency Virus Type 1 Clades" <u>Journal of Virology</u> , Vol. 71, No. 4, April 1997, pp. 3048-3053, American Society for American Microbiology, Washington, DC, USA
	✓ Chihiro Hama et al, "Organization of the Replication Control Region of Plasmid ColIb-P9", Vol. 172, No. 4, <u>Journal of Bacteriology</u> , April 1990, pp. 1983-1991, American Society for Microbiology, Washington, D.C. USA
	✓ A.J. Hamilton et al, "Antisense Gene That Inhibits Synthesis of the Hormone Ethylene in Transgenic Plants", <u>Nature</u> , Vol. 346, July 1990, pp. 284-287, Nature Publishing Group, Hampshire, United Kingdom
	✓ Motoki Kubo et al, "mRNA Secondary Structure in an Open Reading Frame Reduces Translation Efficiency in <i>Bacillus subtilis</i> ", <u>Journal of Bacteriology</u> , Vol. 171, No. 7, July 1989, pp. 4080-4082, American Society for Microbiology, Washington, D.C., USA
	✓ Seong-Wook Lee et al, "Inhibition of Human Immunodeficiency Virus Type 1 in Human T Cells by a Potent Rev Response Element Decoy Consisting of the 13-Nucleotide Minimal Rev-Binding Domain", <u>Journal of Virology</u> , Vol. 68, No. 12, pp. 8254-8264, 1994, American Society for Microbiology, Washington, D.C., USA
	✓ Mark J. Leech et al, "Expression of <i>myb</i> -related Genes in the Moss, <i>Physcomitrella patens</i> ", <u>The Plant Journal</u> , Vol. 3, No. 1, pp. 51-61, 1993, Blackwell Sciences, Ltd., Oxford, UK
	✓ Julianna Lisiewicz et al, "Tat-Regulated Production of Multimerized TAR RNA Inhibits HIV-1 Gene Expression", <u>The New Biologist</u> , Vol. 3, No. 1 (January), 1991, pp. 82-89, W.B. Saunders, Philadelphia, PA, USA
	✓ K.M. Steve Lo et al, "Inhibition of Replication of HIV-1 by Retroviral Vectors Expressing <i>tat</i> -Antisense and Anti- <i>tat</i> Ribozyme RNA", <u>Virology</u> , Vol. 190, pp. 176-183, 1992, The Academic Press, Inc., New York, New York, USA
	✓ Paul S. Lovett, "Translational Attenuation as the Regulator of Inducible <i>cat</i> Genes", <u>Journal of Bacteriology</u> , Jan. 1990, Vol. 172, No. 1, pp. 1-6, American Society for Microbiology, Washington, D.C. USA
	✓ Johan Memelink et al, "Structure and Regulation of Tobacco Extensin", <u>The Plant Journal</u> , 1993, Vol. 4, No. 6, pp. 1011-1022, Blackwell Sciences, Ltd., Oxford, UK
	✓ Titia Sijen et al, "RNA-Mediated Virus Resistance: Role of Repeated Transgenes and Delineation of Targeted Regions", <u>The Plant Cell</u> , Vol. 8, pp. 2277-2294, Dec. 1996, American Society of Plant Physiologists, American Society of Plant Physiologists, Rockville, Maryland, USA
	✓ Maïke Stam et al, "Post-Transcriptional Silencing of Chalcone Synthase in <i>Petunia</i> by Inverted Transgene Repeats", <u>The Plant Journal</u> , 1997, Vol. 12, no. 1, pp. 63-82, Blackwell Sciences, Ltd., Oxford, UK



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	✓ Bruce A. Sullenger et al, "Analysis of <i>trans</i> -Acting Response Decoy RNA-Mediated Inhibition of Human Immunodeficiency Virus Type 1 Transcription", <u>Journal of Virology</u> , Vol. 65, No. 12, Dec. 1991, pp. 6811-6816, American Society for Microbiology, Washington, D.C. USA
	✓ Bruce A. Sullenger, "Overexpression of TAR Sequences Renders Cells Resistant to Human Immunodeficiency Virus Replication" <u>Cell</u> , Vol. 63, Nov 1990, pp. 601-608, Cell Press, Cambridge, Massachusetts, USA
	✓ Lun Quan Sun et al, "Target Sequence-Specific Inhibition of HIV-1 Replication by Ribozymes Directed to <i>tat</i> RNA", <u>Nucleic Acids Research</u> , 1995, Vol. 23, No. 15, pp. 2909-2913, IRL Press Limited, Oxford, England
	✓ Lun-Quan Sun et al, "Ribozyme-Mediated Suppression of Moloney Murine Leukemia Virus and Human Immunodeficiency Virus Type I Replication in Permissive Cell Lines", <u>Proc. Natl. Acad. Sci. USA</u> , Vol. 91, pp. 9715-9719, Oct. 1994, National Academy of Sciences, Washington, D.C. USA
	✓ Hideki Takahashi et al, "Development of Necrosis and Activation of Disease Resistance in Transgenic Tobacco Plants with Severely Reduced Catalase Levels", <u>The Plant Journal</u> , 1997, Vol. 11, No. 5, pp. 993-1005, Blackwell Sciences, Ltd., Oxford, UK
	✓ James D. Thompson et al, "Improved Accumulation and Activity of Ribozymes Expressed From a tRNA-based RNA Polymerase III Promoter", <u>Nucleic Acids Research</u> , 1995, Vol. 23, No. 12, pp. 2259-2268, IRL Press Limited, Oxford, England
	✓ Migara Weerasinghe et al, "Resistance to Human Immunodeficiency Virus Type 1 (HIV-1) Infection in Human CD4 <sup>+</sup> Lymphocyte-Derived Cell Lines Conferred by Using Retroviral Vectors Expressing an HIV-1 RNA-Specific Ribozyme" <u>Journal of Virology</u> , Oct. 1991, Vol. 65, pp. 5531-5534, American Society for American Microbiology, Washington, DC, USA
	✓ Herve Vaucheret et al, "Inhibition of Tobacco Nitrite Reductase Activity by Expression of Antisense RNA", <u>The Plant Journal</u> , 1992, Vol. 2, no. 4, pp. 559-569, Blackwell Sciences, Ltd., Oxford, UK
	✓ Mang Yu et al, " <i>In Vitro</i> and <i>in Vivo</i> Characterization of a Second Functional Hairpin Ribozyme Against HIV-1", <u>Virology</u> , Vol. 26, pp. 381-386 (1995), Academic Press, New York, New York, USA
	✓ Chen Zhou et al, "Inhibition of HIV-1 in Human T-Lymphocytes by Retrovirally Transduced anti- <i>tat</i> and <i>rev</i> Hammerhead Ribozymes", <u>Gene</u> Vol. 149 (1994), pp. 33-39, Elsevier Science, Oxford, United Kingdom
	✓ Rita Zrenner et al., "Evidence of the Crucial Role of Sucrose Synthase for Sink Strength Using Transgenic Potato Plants ( <i>Solanum tuberosum</i> L.)" <u>The Plant Journal</u> , 1995, Vol. 7, No. 1, pp. 97-107, Blackwell Sciences Ltd, Oxford UK

Examiner Signature	Date Considered
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